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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RODNEY DAUGHTREY

Appeal 2008-0202
Application 09/812,224
Technology Center 3600

Decided: April 8, 2009

Before ALLEN R. MACDONALD, *Vice Chief Administrative Patent Judge*,
and LEE E. BARRETT and LINDA E. HORNER, *Administrative Patent
Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Rodney Daughtrey (Appellant) seeks our review under 35 U.S.C.
§ 134 of the final rejection of claims 1-39. We have jurisdiction under
35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM-IN-PART and enter NEW GROUNDS OF REJECTION, pursuant to our authority under 37 C.F.R. § 41.50(b).

THE INVENTION

The Appellant's claimed invention is directed to a user interface, method, and computer program product for use in travel planning. Claims 1, 4, and 15, reproduced below, are representative of the subject matter on appeal.

1. A user interface for a fare rule summary tool, the user interface displayed on a monitor, the user interface comprising:

a fare evaluation result table that displays fare rule summaries for fares in slices of an itinerary, the fare evaluation result table having a first one of rows and columns representing fares and a second one of rows and columns representing the fare rule summaries.

4. The user interface of claim 2 wherein at least one of the columns represents fare combinability restrictions.

15. A method for producing a concise summary of fare rules and restrictions that the fare rules place on fares, the method comprising:

parsing a set of queries to provide at least one city pair corresponding to an origin and a destination of a flight slice;

retrieving fares and fare rules for each city

pair over a time period set in the query;
evaluating the retrieved fares against the
retrieved rules and returning a status corresponding
to pass, fail, or defer; and
producing a summary of the results of
evaluating the rules for a fare against the criteria
specified in the query; and
displaying the summary on a user output
device.

THE REJECTIONS

The Examiner relies upon the following as evidence of
unpatentability:

Kirk	US 5,768,578	Jun. 16, 1998
Tanner	WO 01/59590 A2	Aug. 16, 2001

The following rejections are before us for review:

1. Claims 1-14 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.
2. Claims 1-6, 8, 9, 12-17, 19, 20, and 22-38 are rejected under 35 U.S.C. § 102(b) as anticipated by Tanner.¹

¹ Although the Examiner's Grounds of Rejection (Ans. 3) list claim 21 as anticipated by Tanner, the Examiner does not provide any discussion of how Tanner anticipates claim 21 (Ans. 3-6) and further admits in the discussion of the obviousness rejection of claim 21 that Tanner does not disclose applying a color to cells of the table (Ans. 6). Thus, we treat the inclusion of claim 21 in this anticipation rejection as a typographical error by the Examiner. Further, the Examiner's Grounds of Rejection (Ans. 3) omit

3. Claims 18, 21, and 39 are rejected under 35 U.S.C. § 103(a) as unpatentable over Tanner and Kirk.

REJECTION OF CLAIMS 1-14 UNDER 35 U.S.C. § 101 ISSUE

The Examiner rejected claims 1-14 under 35 U.S.C. § 101 as directed to patent ineligible subject matter. Ans. 3. The Appellant contends that the claims are drawn to a patent eligible article of manufacture. App. Br. 9-10. The issue presented is:

Has the Appellant shown the Examiner erred in determining that the arrangement of information on a user interface on a monitor is an abstract intellectual concept and thus directed to patent ineligible subject matter?

FINDING OF FACT

We find that the following enumerated finding is supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

1. The term “interface” in the computer science art means “a. The point of interaction or communication between a computer and any other entity, such as a printer or human operator. b. The layout of

claim 5 from the listing of claims anticipated by Tanner, but the subsequent discussion of the anticipation rejection includes an analysis of claim 5 (Ans. 4). As such, we treat the omission of claim 5 as a typographical error.

an application's graphic or textual controls in conjunction with the way the application responds to user activity.” *The American Heritage Dictionary of the English Language* (4th ed. 2000), found at www.bartelby.com.

PRINCIPLES OF LAW

Statutory Subject Matter

“[E]very discovery is not embraced within the statutory terms [of 35 U.S.C. § 101]. Excluded from such patent protection are laws of nature, natural phenomena, and abstract ideas.” *Diamond v. Diehr*, 450 U.S. 175, 185 (1981) (citations omitted). “An idea of itself is not patentable.” *Id.* (quoting *Rubber-Tip Pencil Co. v. Howard*, 20 Wall. 498, 507, 22 L.Ed. 410 (1874)).

ANALYSIS

Claims 1-14 are directed to a “user interface” comprising a table that displays information in a particular arrangement of rows and columns. The claim is thus directed to an arrangement of information in a table, a clear abstraction. *See e.g., In re Warmerdam*, 33 F.3d 1354, 1360 (Fed. Cir. 1994) (holding that the steps of locating a medial axis and creating a bubble hierarchy “describe nothing more than the manipulation of basic mathematical constructs, the paradigmatic ‘abstract idea’”).

The claimed user interface is directed to nothing more than the layout of information at the point of interaction with a human being (Fact 1). Thus, claims 1-14 fail to go beyond a recitation of the manipulation of abstract ideas. *Id.*

The Appellant contends that claims 1-14 are not drawn to an interface *per se*, but rather are drawn to an article of manufacture, *viz.*, an interface displayed on a monitor (App. Br. 10). Although the preamble recites that the user interface is “displayed on a monitor,” the monitor is nowhere else recited in the claim, nor is the monitor a positively recited element of a claimed combination. This recitation of a monitor in the preamble fails to breathe life or meaning into the claim. Rather, the recitation is simply a statement of intended use. “If ... the body of the claim fully and intrinsically sets forth the complete invention, including all of its limitations, and the preamble offers no distinct definition of any of the claimed invention’s limitations, but rather merely states, for example, the purpose or intended use of the invention, then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a claim limitation.” *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999) (citations omitted). As such, the recitation that the interface is “displayed on a monitor” does not further limit the claimed “user interface.”

We further conclude that the claimed “user interface” is unpatentable because it is not within any of the four enumerated § 101 categories of

“process, machine, manufacture, or composition of matter.” *See In re Nuijten*, 500 F.3d 1346, 1354 (Fed. Cir. 2007), *petition for en banc reh’g denied*, 515 F.3d 1361 (Fed. Cir. 2008), *cert. denied*, 129 S. Ct. 70 (2008) (“If a claim covers material not found in any of the four statutory categories, that claim falls outside the plainly expressed scope of § 101 even if the subject matter is otherwise new and useful.”). Thus, a “signal” cannot be patentable subject matter because it is not within any of the four categories. *Id.* at 1357. Similarly, a “paradigm” does not fit within any of the four categories. *In re Ferguson*, No. 2007-1232, slip op. at 11 (Fed. Cir. March 6, 2009). The claimed “user interface” is not an article of manufacture, as asserted by Appellants, because the recitation of a monitor in the preamble is simply a statement of intended use, and thus the claim is directed to an abstraction.

The Appellant further contends that the claimed interface is not merely non-functional descriptive material, because, a claim which calls for a user interface displayed on a monitor recites patentable subject matter (Reply Br. 1-2, citing *In re Lowry*, 32 F.3d 1579 (Fed. Cir. 1994)). We want to make clear that we are not relying on the printed matter doctrine as the basis for sustaining the Examiner’s rejection of claims 1-14. Rather, claims 1-14 fail to recite statutory subject matter, because the claims as a whole are directed to no more than the manipulation of abstract ideas.

The Appellant further contends that in *Warmerdam*, the Federal Circuit found that claim 5, directed to a machine, was statutory subject

matter, even though the court held that claims 1-4, from which claim 5 depended, were directed to non-statutory subject matter (Reply Br. 2, citing *In re Warmerdam*, 33 F.3d 1354 (Fed. Cir. 1994)). We first note that in *Warmerdam*, the issue before the Federal Circuit was whether claim 5 was indefinite under 35 U.S.C. § 112, second paragraph, and not whether claim 5 was directed to statutory subject matter. 33 F.3d at 1360-61. Claim 5 of *Warmerdam* recited “[a] machine having a memory which contains data representing a bubble hierarchy generated by the method of any of Claims 1 through 4.” *Id.* at 1358. In the present case, claims 1-14 do not recite a machine or a memory. Rather, these claims merely recite a user interface. “It is the claims which define the metes and bounds of the invention entitled to the protection of the patent system.” *Id.* at 1360 (citing *Zenith Lab. Inc. v. Bristol-Myers Squibb Co.*, 19 F.3d 1418, 1424 (Fed. Cir. 1994)). The claimed user interface is comprised of a specific arrangement of information, but this information could be presented in any manner, and does not require the use of a machine or memory, as claimed. As such, we see no parallel between claim 5 of *Warmerdam* and Appellant’s claims 1-14.

The Appellant further asserts that the operation of the interface produces a useful, concrete, and tangible result, namely, a fare evaluation result table that displays fare rule summaries for fares in slices of an itinerary, while organizing the data such that fares and fare rule summaries can be quickly evaluated by a user (App. Br. 10, citing *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir.

1998)). We fail to see how the holding in *State Street* is applicable to the present claims, because the claims at issue in *State Street* were directed to a machine that caused transformation of data. 149 F.3d at 1373. As discussed *supra*, Appellant's claims 1-14 are not directed to a machine, and the claimed user interface does not require any transformation of data. Rather, the claims merely require data in the form of a user interface that can be displayed.

As such, we hold that claims 1-14 are unpatentable under 35 U.S.C. § 101 as being directed to an abstract idea and thus patent ineligible subject matter.

NEW GROUND OF REJECTION OF CLAIMS 15-18 AND 28-35

We further enter a new ground of rejection of method claims 15-18 and 28-35 under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. The law in the area of patent-eligible subject matter for process claims has recently been clarified by the Federal Circuit in *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (en banc), *petition for cert. filed*, 77 USLW 3442 (U.S. Jan. 28, 2009) (No. 08-964).

The en banc court in *Bilski* held that “the machine-or-transformation test, properly applied, is the governing test for determining patent eligibility of a process under § 101.” *Id.* at 956. The court in *Bilski* further held that “the ‘useful, concrete and tangible result’ inquiry is inadequate [to determine whether a claim is patent-eligible under § 101.]” *Id.* at 959-60.

The court explained the machine-or-transformation test as follows:
“A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.” *Id.* at 954 (citations omitted). The court explained that “the use of a specific machine or transformation of an article must impose meaningful limits on the claim’s scope to impart patent-eligibility” and “the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity.” *Id.* at 961-62 (citations omitted).

The court declined to decide under the machine implementation branch of the inquiry whether or when recitation of a computer suffices to tie a process claim to a particular machine. *Id.* at 962. As to the transformation branch of the inquiry, however, the court explained that transformation of a particular article into a different state or thing “must be central to the purpose of the claimed process.” *Id.* As to the meaning of “article,” the court explained that chemical or physical transformation of physical objects or substances is patent-eligible under § 101. *Id.* The court also explained that transformation of data is sufficient to render a process patent-eligible if the data represents physical and tangible objects, i.e., transformation of such raw data into a particular visual depiction of a physical object on a display. *Id.* at 962-63. The court further noted that transformation of data is insufficient to render a process patent-eligible if the data does not specify any particular type or nature of data and does not specify how or where the

data was obtained or what the data represented. *Id.* at 962 (citing *In re Abele*, 684 F.2d 902, 909 (CCPA 1982) (process claim of graphically displaying variances of data from average values is not patent-eligible) and *In re Meyer*, 688 F.2d 789, 792-93 (CCPA 1982) (process claim involving undefined “complex system” and indeterminate “factors” drawn from unspecified “testing” is not patent-eligible)).

Method claims 15-18 recite a series of process steps for producing a summary of fare rules and restrictions. The last step of the method recites displaying the summary on a user output device. This general device is not a particular machine, and thus these claims do not limit the process steps to any specific machine or apparatus. Further, the involvement of the machine in the claimed process is merely an insignificant extra-solution activity. As such, the claims fail the first prong of the machine-or-transformation test because they are not tied to a particular machine or apparatus.

The steps of method claims 15-18 also fail the second prong of the machine-or-transformation test because the data does not represent physical and tangible objects.² Rather, the data represents intangible information about fares and fare rules. It is not clear to what extent the data must relate to the “real world.” In *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), the court held that transformation of

² Because the data does not represent physical and tangible objects, we need not reach the issue of whether mere manipulation of the data for display on an output device is a sufficient “transformation” of data to render a process patent-eligible under § 101.

data “representing discrete dollar amounts” by a machine defined statutory subject matter. However, in the absence of clear guidance, we feel it is necessary to raise the rejection. Thus, the process of claims 15-18 fails the machine-or-transformation test and is not directed to patent-eligible subject matter under 35 U.S.C. § 101.

Method claims 28-35 recite a single process step of rendering data on a monitor for providing a fare rule summary tool as a user interface for display on a monitor. The issue presented by these claims is whether recitation of a monitor suffices to tie the process step to a particular machine. This is the exact issue that the court in *Bilski* declined to decide. 545 F.3d at 962. The court did, however, provide some guidance when it explained that the use of a specific machine must impose meaningful limits on the claim’s scope to impart patent-eligibility. *Id.* at 961. Claims 28-35 recite a method of rendering data on a monitor, wherein the meaningful limits on the claim’s scope reside in the kind of data displayed and the particular format of the rendered data. The fact that the data is rendered on a monitor fails to impose any meaningful limits on the claim’s scope as it adds nothing more than a general purpose display device that is capable of displaying data generally. The monitor has not been specially configured to make it capable of rendering the particular data recited in claims 25-28. The “monitor” upon which the data is rendered is a general device, not a particular machine, and thus these claims do not tie the process step to any specific machine or apparatus. As such, the claims fail the first prong of the

machine-or-transformation test because they are not tied to a particular machine or apparatus.

The step of method claims 28-35 also fails the second prong of the machine-or-transformation test because the sole step of merely rendering data on a monitor does not involve transformation of the data into a different state or thing. The claim merely recites the step of displaying data in a table with particular data in rows and columns. The claim does not recite any steps that require, for example, transformation of raw data representing physical and tangible objects into a particular visual depiction of a physical object on a display. Rather, the data represents intangible information about fares and fare rules. Thus, the process of claims 28-35 fails the machine-or-transformation test and is not directed to patent-eligible subject matter under 35 U.S.C. § 101.

NEW GROUND OF REJECTION OF CLAIMS 19-27 AND 36-39

We further enter a new ground of rejection of computer program product claims 19-27 and 36-39 under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Claim 19 recites:

A computer program product residing on a computer readable medium for producing a fare rule summary comprises [*sic*] instructions for causing the computer to:

populate a summary table of fares and corresponding evaluations for each fare rule category, each evaluation having a status; and

render the summary table on an output device.

Claim 36 similarly recites a computer program product residing on a computer readable medium for producing a concise summary of fare rules and restrictions that the fare rules place on fares comprising instruction steps identical to the steps of method claim 15.

Since claim construction is “an important first step in a § 101 analysis,” *Bilski*, 545 F.3d at 951, we begin by determining the scope of claims 19 and 36. Each of these claims recites an article of manufacture for producing a fare rule summary. The claimed article of manufacture includes computer program instructions residing on a computer readable medium. The structures that are encompassed by the computer readable medium in claims 19 and 36, however, are vast. The phrase “computer readable medium” is not defined or discussed in the Appellant’s Specification. The Specification refers only generally to a storage media (Spec. 4:17) and uses the term, “computer readable medium,” only in original claim 19. The phrase “computer readable medium” was routinely used in the computer arts at the time of Appellant’s invention to refer to both tangible and intangible media. In particular, “computer readable medium” was conventionally used at the time of the invention as a term of art to refer to intangible computer readable media including “transmission” media³ and carrier waves embodied

³ See e.g., U.S. Patent No. 6,055,571, issued April 25, 2000, col. 18, ll. 27-37 (“One of skill in the art will appreciate that ‘media’, or ‘computer-readable media’, as used here, may include a diskette, a tape,

in electrical, electromagnetic, infrared, or optical signals, or any other media from which a computer can read.⁴ Giving claims 19 and 36 the broadest reasonable interpretation in light of the Specification and in light of the meaning of “computer readable medium” in the art, these claims are broad enough to encompass a signal.⁵

Signals are not patent eligible subject matter under 35 U.S.C. § 101. *In re Nuijten*, 500 F.3d at 1357 (“A transitory, propagating signal is not a

a compact disc, an integrated circuit, a cartridge, a remote transmission via a communications circuit, or any other similar medium useable by computers. For example, to supply software for enabling a computer system to operate in accordance with the invention as a node, network broker, switch, or user, the supplier might provide a diskette or might transmit the software in some form via satellite transmission, via a direct telephone link, or via the Internet.”).

⁴ See e.g. U.S. Patent No. 6,032,260, issued February 29, 2000, col. 5, ll. 23-31 (“[T]he computer-readable medium may include a floppy disk, a flexible disk, hard disk, magnetic tape, or any other magnetic medium, a CD-ROM, any other optical medium, punch cards, paper tape, any other physical medium with patterns of holes, a RAM, a PROM, an EPROM, a FLASH-EPROM, any other memory chip or cartridge, a carrier wave embodied in an electrical, electromagnetic, infrared, or optical signal, or any other medium from which a computer can read.”).

⁵ Our review of the USPTO EAST database of U.S. Patents and Published Applications shows that there are more than 2,400 distinct patents and published applications, filed before Appellant’s priority date, which defined “computer readable medium (or media)” as inclusive of either a “transmission medium (or media)” or a “carrier wave.” As of today that number is greater than 24,000.

‘process, machine, manufacture, or composition of matter.’ Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. § 101.”). “If a claim covers material not found in any of the four statutory categories, that claim falls outside the plainly expressed scope of § 101 even if the subject matter is otherwise new and useful.” *Id.* at 1354.

Because we have concluded that claims 19-27 and 36-39 cover at least one embodiment which is directed to subject matter that is unpatentable under § 101, we conclude that claims 19-27 and 36-39 are unpatentable as being directed to non-statutory subject matter, i.e., claims which are broad enough to read on statutory as well as non-statutory subject matter are treated as unpatentable because an applicant can always amend the claims to limit them to statutory subject matter, such as a tangible medium. *Cf. Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1329 (Fed. Cir. 2003); *see also* MPEP § 2105.

PRIOR ART REJECTIONS

ISSUES

The Appellant contends that Tanner does not show “a fare evaluation result table that displays fare rule summaries for fares in slices of an itinerary, the fare evaluation result table having a first one of rows and columns representing fares and a second one of rows and columns representing the fare rule summaries,” as recited in claim 1. App. Br. 14-15.

The Appellant further contends that Tanner does not show various features of the claimed table as recited in many of the remaining claims.

The issue presented is:

Has the Appellant shown the Examiner erred in finding that Tanner, either taken alone or in combination with Kirk, discloses each and every feature of the claims?

ADDITIONAL FINDINGS OF FACT

We find that the following enumerated findings are supported by at least a preponderance of the evidence.

2. A common and ordinary meaning of fare is “1. A transportation charge, as for a bus.” *The American Heritage Dictionary of the English Language* (4th ed. 2000), found at www.bartelby.com.
3. The Appellant’s Specification does not provide a definition of “fare.” Appellant’s Figure 3 labels the first column in the table “Fare.” This column contains information about the originating and destination cities and additional codes which are not described anywhere in the Specification. Spec. Fig. 3.
4. The Appellant’s Specification also refers to “fare price,” shown in the second column of the table of Figure 3. Spec. 7: 18; Fig. 3.
5. The Appellant’s Specification also describes that “[f]or example, database 20a can store the Airline Tariff Publishing Company database of published airline fares and their associated rules,

routings and other provisions, the so-called ATPCO database.”
Spec. 3:28 – 4:2.

6. Reference AM, entitled “ATPCO International Passenger Fares last updated 10-02-2002 Airline Tariff Publishing Company Washington Dulles International Airport,” provides examples of a “new fare” which is described as including, in addition to fare amount, tariff, carrier, market, and fare class information. Reference AM at 19 (Example 1); *Id.* at 20 (Example 1). Reference AM, however, also uses the word “fare” to refer to fare price or amount. Reference AM at 3 (Table referring to “Fare USD”); *Id.* at 22 (Table referring to “Published Fare”).
7. Reference AL, entitled “ATPCO Local Fares last updated 10-02-2002 Airline Tariff Publishing Company Washington Dulles International Airport,” likewise describes that the ATPCO master fares files contain one record for each fare amount, and shows the record including tariff, carrier, market, fare class, fare amount, effective date, link, and sequence number information. Reference AL at 3. Reference AL, however, also uses the word “fare” to refer to fare price or amount. Reference AL at 3 (Table referring to “Fare”).
8. Tanner discloses a table displayed on a computer monitor that is generated as the result of a query of a database, using travel input details, to determine applicable flight options, and then a query of

a Computer Reservation System (CRS) to determine if there are seats available for the flight options, after evaluating whether all of the net fare restrictions and conditions are met (Tanner, p. 8, ll. 3-13; Figs. 4A & 4B).

9. The table includes rows representing fares. For example, each row represented in the table of Figure 4A represents a fare from Dallas to Frankfurt. These fares include information in each row including the departure and destination cities, the fare base price, tax, and fare total price, and the carrier. Tanner, Fig. 4A.
10. The table further includes columns representing fare rule summaries. For example, the column labeled Rules in Figure 4A includes a button, which when marked, indicates that rules exist for that particular fare shown in the corresponding row. Tanner, Fig. 4A.
11. The table of Figure 4A further includes a column labeled “Adult” which lists the base price (without tax) for an adult for each fare listed in the associated row. Tanner, Fig. 4A.
12. Tanner inherently discloses that the fare rules summaries for certain trips (e.g., one-way trips) would necessarily be displayed in slices of an itinerary. Although Figure 4A shows fares for a round trip between Dallas and Frankfurt, which fares are not shown in slices (e.g., inbound and outbound slices) in the table, if the user of Tanner’s system wanted to search for one-way fares, it would

simply input 0 days in the “Returning In” box, and the table would then display fares for that one-way trip in a single slice or segment of the itinerary.

13. The table of Figure 4A of Tanner includes a column labeled “Avl,” including buttons, which when marked, indicate that availability for the fare listed in the associated row exists. Tanner, p. 10.

PRINCIPLES OF LAW

Claim Construction

"Both anticipation under § 102 and obviousness under § 103 are two-step inquiries. The first step in both analyses is a proper construction of the claims. . . . The second step in the analyses requires a comparison of the properly construed claim to the prior art." *Medichem, S.A. v. Rolabo, S.L.*, 353 F.3d 928, 933 (Fed. Cir. 2003) (internal citations omitted).

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Although a patent applicant is entitled to be his or her own lexicographer of patent claim terms, in *ex parte* prosecution it must be within limits. *In re Corr*, 347 F.2d 578, 580 (CCPA 1965). The applicant must do so by placing such definitions in the Specification with sufficient clarity to provide a person of ordinary skill in the art with clear and precise notice of the meaning that is to be construed.

See also In re Paulsen, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (although an inventor is free to define the specific terms used to describe the invention, this must be done with reasonable clarity, deliberateness, and precision; where an inventor chooses to give terms uncommon meanings, the inventor must set out any uncommon definition in some manner within the patent disclosure so as to give one of ordinary skill in the art notice of the change).

It is the appellants' burden to precisely define the invention, not the PTO's. *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997). Appellants always have the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969).

Anticipation

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Obviousness

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, ___, 127 S. Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 550 U.S. at ___, 127 S. Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

ANALYSIS

Claim Construction

In order to make a determination of patentability, we must first construe “fare” and “slices” as used in the claims.

A common and ordinary meaning of fare is “1. A transportation charge, as for a bus” (Fact 2). The Appellant’s Specification does not provide a definition of “fare.” Appellant’s Figure 3 labels the first column in the table “Fare.” This column contains information about the originating and destination cities and additional codes which are not described anywhere in the Specification (Fact 3).

The Appellant’s Specification also refers on page 7, line 18 to “fare price,” shown in the second column of the table of Figure 3 (Fact 4). In the

Reply Brief, the Appellant draws a distinction between “price” and a “fare,” and contends that “the fare has a unique code to identify the fare, e.g., ‘CO.BOS->PHL.OW.Y.’, whereas, ‘price’ is a monetary amount for the particular fare” (Reply Br. 4). The Appellant further contends that “fares” have a unique meaning, as disclosed on page 3, line 28 to page 4, line 2 of Appellant’s Specification (Reply Br. 5). This portion of the Appellant’s Specification describes that in one example, the database 20a can store airline fares as published in the Airline Tariff Publishing Company (ATPCO) database (Fact 5).

We issued an Order on June 18, 2008 requesting that the Appellant submit information regarding the prior art ATPCO database and computer-based tools for displaying the rules and restrictions for a particular fare. In response to our Order, the Appellant has furnished us with information pertaining to the fare rules output product obtained from ATPCO, an output screen shot depicting a sample fare summary conventionally used by Computer Reservation Services around and prior to the filing of the present application, and documents pertaining to fares and their routings obtained from ATPCO. Appellant’s Reply to Order 1-2. The Appellant contends that two submitted documents, Reference AL and Reference AM, “clearly demonstrate that ‘fares’ have a special meaning in the transportation industry and in particular in the airline industry.” Appellant’s Reply to Order 3.

Reference AM provides examples of a “new fare” which is described as including, in addition to fare amount, tariff, carrier, market, and fare class information; however, it also uses the word “fare” to refer to fare price or amount (Fact 6). Reference AL likewise describes that the ATPCO master fares files contain one record for each fare amount, and shows the record including tariff, carrier, market, fare class, fare amount, effective date, link, and sequence number information; however, the same reference also uses the word “fare” to refer to fare price or amount (Fact 7). It appears from these references that the term “fare” in the airline industry is used, in some instances, to refer to a fare amount or price and, in other instances, to refer to information identifying a fare by tariff, carrier, market, and fare class.

We must be careful not to read a particular embodiment appearing in the written description into the claim if the claim language is broader than the embodiment. *See Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (“Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.”) The challenge is to interpret claims in view of the specification without unnecessarily importing limitations from the specification into the claims. *See E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003). As such, we decline to define “fares” so

narrowly as to require the unique code provided as an example in Figure 3 of Appellant's Specification or to define "fares" so narrowly as to require the specific information contained in the published ATPCO fares under the more specific usage of this term in the industry. Rather, the Examiner's broader reading of "fare" to refer to fare price is reasonable in view of the evidence before us.

The Appellant's Specification describes a "slice" as a "trip segment" (Spec. 5:11). Under our understanding of this term, a one-way trip from Boston to Philadelphia could be comprised of a single trip segment or slice.

REJECTION OF CLAIMS 1-6, 8, 9, 12-17, 19, 20, AND 22-38
UNDER 35 U.S.C. § 102

Group 1

The Appellant argues claims 1, 3, 12-14, 28 and 30 as a first group. We select claim 1 as the representative claim, and the remaining claims stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(vii) (2008).

Tanner discloses a table displayed on a computer monitor that is generated as the result of a query of a database, using travel input details, to determine applicable flight options, and then a query of a Computer Reservation System (CRS) to determine if there are seats available for the flight options, after evaluating whether all of the net fare restrictions and conditions are met (Fact 8). The table includes rows representing fares. For example, each row represented in the table of Figure 4A represents a fare

from Dallas to Frankfurt. These fares include information in each row including the departure and destination cities, the fare base price, tax, and fare total price, and the carrier (Fact 9).

The table further includes columns representing fare rule summaries. For example, the column labeled Rules in Figure 4A includes a button, which when marked, indicates that rules exist for that particular fare shown in the corresponding row (Fact 10). We note that the claims do not require that the actual rules are depicted in the table. Rather, the claims require only that the rows or columns “represent” fare rule summaries. Appellant’s claim 3 implies that one column of the fare rules summaries could be a column showing the fare price. The table of Figure 4A further includes a column labeled “Adult” which lists the base price (without tax) for an adult for each fare listed in the associated row (Fact 11). As such, the “Rules” and “Adult” columns of Figure 4A of Tanner represent fare rules summaries.

Tanner inherently discloses that the fare rules summaries for certain trips (e.g., one-way trips) would necessarily be displayed in slices of an itinerary (Fact 12). Although Figure 4A shows fares for a round trip between Dallas and Frankfurt, which fares are not shown in slices (e.g., inbound and outbound slices) in the table, if the user of Tanner’s system wanted to search for one-way fares, it would simply input 0 days in the “Returning In” box, and the table would then display fares for that one-way trip in a single slice or segment of the itinerary (*Id.*). As such, Tanner

discloses each and every element of claim 1 and thus anticipates the claim. Claims 3, 12-14, 28, and 30 fall with claim 1.

Group 2: Claims 2 and 29

Claim 2 recites wherein rows of the table represent fares and columns represent the rule summaries. As we found *supra*, Figure 4A of Tanner shows a table in which the rows represent fares and the columns represent rule summaries (Facts 9, 10). Thus, Tanner anticipates claim 2, and claim 29 falls with claim 2.

Group 3: Claims 4 and 31

Claims 4 and 31 recite wherein at least one of the columns represents fare combinability restrictions. According to the Appellant's Specification, "[c]ombinability codes 98 represent legal combinations for fares in one slice with fares in another slice." Spec. 7:21-23. Tanner does not appear to show any columns in its table where the information in the column represents fare combinability restrictions. As such, Tanner does not anticipate claims 4 and 31.

Groups 4 & 5: Claims 5, 6, 32, and 33⁶

Claim 5 and 32 recite that the table has the fare rules organized into categories of fare rules, and cells of the fare evaluation result table contain a status that would correspond to pass, fail, or defer for the fares. The Appellant argues that Tanner does not disclose organizing fare rules into categories of fare rules and that the AvL column in Tanner refers to available net fares and not to the status of whether fares pass particular rules. App. Br. 18. The table of Figure 4A of Tanner includes a column labeled “Avl,” including buttons, which when marked, indicate that availability for the fare listed in the associated row exists (Fact 13). As such, the Avl button of Tanner indicates only whether a particular fare is available and does not contain any information corresponding to whether that fare passed, for example, certain fare rules. As such, Tanner does not anticipate claims 5 and 32, or claims 6 and 33, which depend therefrom.

Group 6: Claims 8, 9, 34, and 35⁷

Claims 8 and 34 recite that the table depicts the statuses of the fare rules summaries. The Examiner found that Tanner discloses statuses in the Avl column. As we found *supra*, the Avl column of Tanner’s table contains

⁶ The Appellant includes claim 7 as part of Group 5; however, the Examiner has not presented a rejection of claim 7 based on the prior art.

⁷ The Appellant includes claims 10 and 11 as part of Group 6; however, the Examiner has not presented a rejection of claims 10 and 11 based on the prior art.

information indicating the availability for the fare listed in the associated row (Fact 13). As such, the Avl column of Tanner indicates only whether a particular fare is available and does not contain any information corresponding to the status of a fare rules summary. Thus, Tanner does not anticipate claims 8 and 34, or claims 9 and 35, which depend therefrom.

Group 7-9: Claims 15-17 and 36-38

Claim 15 recites a method for producing a concise summary of fare rules and restrictions that the fare rules place on fares including the step of “evaluating the retrieved fares against the retrieved rules and returning a status corresponding to pass, fail, or defer.” Claim 36 recites a computer program product for causing a computer to perform the above-recited evaluating step.

The Examiner points to Figure 4A of Tanner and the portion labeled (AvL) as disclosure of the evaluating step. Ans. 4. As we found *supra*, the Avl button of Tanner indicates only whether a particular fare is available and does not contain any information corresponding to whether that fare passed, for example, certain fare rules (Fact 13). As such, Tanner does not anticipate claims 15 and 36, or claims 16, 17, 37, and 38, which depend therefrom.

Groups 10-15: Claims 19, 20, and 23-27

Claim 19 recites a computer program product for causing the computer to “populate a summary table of fares and corresponding evaluations for each fare rule category, each evaluation having a status.” As we found *supra*, the Avl column of Tanner’s table contains information indicating the availability for the fare listed in the associated row (Fact 13). As such, the Avl column of Tanner indicates only whether a particular fare is available and does not contain any information corresponding to the status of a fare rules summary. Thus, Tanner does not anticipate claim 19 or claims 20 and 23-27, which depend therefrom.

REJECTION OF CLAIMS 18, 21, AND 39 UNDER 35 U.S.C. § 103

Claims 18, 21, and 39 depend from claims 15, 19, and 36, respectively. The Examiner relies on Kirk for teaching a display of different color in a document to attract a user’s attention. Ans. 6. The Appellant contends that Kirk does not cure the deficiencies of Tanner, and thus one of ordinary skill in the art would not have been motivated to apply colors to the cells to distinguish different statuses. As we found *supra*, Tanner does not disclose each and every element of claims 15 (evaluating retrieved fares against retrieved rules and returning a status corresponding to pass, fail, or defer), 19 (populating a summary table of fares and corresponding evaluations for each fare rule category, each evaluation having a status), and 36 (evaluating retrieved fares against retrieved rules and returning a status

corresponding to pass, fail, or defer). Thus, the Examiner has failed to provide a reason with a rational underpinning as to why one having ordinary skill in the art would have modified the table of Tanner, in view of the teaching of either Tanner or Kirk, to show a status as recited in claims 15, 19, or 35, from which claims 18, 21, and 39 depend. As such, we cannot sustain the rejection of claims 18, 21, and 39.

CONCLUSIONS

The Appellant has failed to show the Examiner erred in determining that claims 1-14 recite patent ineligible subject matter under 35 U.S.C.

§ 101. We further enter new grounds of rejection of claims 15-39 under 35 U.S.C. § 101 as being directed to patent ineligible subject matter.

The Appellant failed to show the Examiner erred in determining that claims 1-3, 12-14, and 28-30 are anticipated by Tanner.

The Appellant has shown, however, that the Examiner erred in determining that claims 4-6, 8, 9, 15-17, 19, 20, and 22-27 are anticipated by Tanner and that claims 18, 21, and 39 are unpatentable over Tanner and Kirk.

DECISION

The decision of the Examiner to reject claims 1-14 under 35 U.S.C. § 101 is AFFIRMED; the decision of the Examiner to reject claims 1-3, 12-14, and 28-30 under 35 U.S.C. § 102 is AFFIRMED; and the decision of the

Appeal 2008-0202
Application 09/812,224

Examiner to reject claims 4-6, 8, 9, 15-17, 19, 20, and 22-27 under 35 U.S.C. § 102 and claims 18, 21, and 39 under 35 U.S.C. § 103 is REVERSED.

We also enter new grounds of rejection of claims 15-39 under 35 U.S.C. § 101 as being directed to patent ineligible subject matter.

FINALITY OF DECISION

Regarding the affirmed rejection(s), 37 C.F.R. § 41.52(a)(1) provides "Appellant may file a single request for rehearing within two months from the date of the original decision of the Board."

In addition to affirming the Examiner's rejection(s) of one or more claims, this decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b) (2008). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION,⁸ must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of the appeal as to the rejected claims:

⁸ This two month time period begins to run from the decided date shown on the front page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner. . . .

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Should Appellant elect to prosecute further before the Examiner pursuant to 37 C.F.R. § 41.50(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the Examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If Appellant elects prosecution before the Examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED-IN-PART; 37 C.F.R. § 41.50(b)

vsh

Appeal 2008-0202
Application 09/812,224

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